

27-78. (1) Weatherproof plugs and sockets shall be of specially robust construction, and be provided with efficient means to keep the sockets weatherproof when the plug is removed therefrom. When a loose cover is employed for this purpose it shall be anchored to the socket by means of a metal chain.

(2) When the plug is inserted in its socket, the combined fitting and its interlocking switch (if any) shall also be weatherproof.

27-79. (1) Adaptors shall be made of tough non-hygroscopic material which is not readily combustible, and which, in the case of single-way adaptors, shall be non-conducting.

(2) Adaptors for use in bayonet lamp-holders shall comply with the corresponding dimensions for lamp-caps as specified in British Standard Specification No. 161.

(3) Adaptors for use in screw lamp-holders shall be of one or other of the following types, namely:—

(a) Combined adaptor with pull-out plug; or

(b) Adaptor with a loose screw to prevent twisting of the flexible conductor.

(4) No adaptor shall be fitted to any appliance using more than 1.25 amperes.

ELECTRIC SIGNS, OUTLINE AND DECORATIVE LIGHTING.

27-91. In the case of luminous-discharge-tube electric signs, outline or decorative lighting—

(a) All high pressure or extra-high pressure parts shall be effectively screened in such a manner as to prevent unauthorized persons having access thereto or making contact therewith; and

(b) All high pressure or extra-high pressure connections shall be mechanically and electrically sound; and

(c) Transformers shall have independent primary and secondary windings which shall not be interconnected. All windings shall be suitably insulated. The open-circuit voltage of the secondary winding shall not exceed 15,000 volts; and

(d) All metal enclosures shall—

(i) Have a minimum thickness of 0.064 in. (16 S.W.G.) when erected outdoors and liable to mechanical damage or 0.028 in. (22 S.W.G.) in all other cases; and

(ii) Be galvanized, or treated with at least three coats of anti-corrosive paint, or otherwise suitably protected from corrosion; and

(iii) Have all holes for cables, flexible cords, electrodes, and electrode lead-wires suitably bushed to guard against abrasion and creepage; and

(e) All enclosures shall—

(i) Be properly drained where exposed to the weather; and,

(ii) Be fire-resisting where used for transformers and/or resistances.

PART 28.—MOTORS AND CONTROL GEAR.

MOTORS.

28-01. The temperature rise of every motor shall comply with the requirements of British Standard Specification No. 168.

28-02. All live metal of motors operating at other than extra-low pressure shall be so guarded or placed that they cannot be accidentally touched or short-circuited.

RESISTANCES AND MACHINE-CONTROL GEAR.

28-11. The general construction of all resistances and machine-control gear shall be in accordance with the appropriate British Standard Specification or its equivalent.

28-12. All live parts of resistances and machine-control gear operated at other than extra-low pressure shall be so guarded as to prevent accidental contact therewith.

28-13. No accessible part of the case of any resistance shall rise to a temperature higher than 176° F.

28-14. Internal connections of resistances shall not be soldered, and all such connections, unless self supporting or rigidly fixed in position, shall be continuously insulated with non-ignitable beads or other suitable non-ignitable material.

PART 29.—ELECTRIC LIFTS.

29-01. (1) No subcircuit having a voltage exceeding low pressure where practicable, and in no case exceeding medium pressure, shall be connected to any lift-car.

(2) No push button for lighting or signalling purposes shall be used for any lift in any subcircuit having a voltage exceeding low pressure.

(3) No voltage exceeding medium pressure shall be used for any lift except for the operation of a motor contained within a machine-room, in which case the control and signal conductors shall be thoroughly insulated from the power conductors.

29-02. Every lift, other than a service-lift, operated by a polyphase motor shall be provided with means to prevent the motor from starting if—

(a) The phase rotation is in the wrong direction or

(b) There is a failure in any phase.

29-03. (1) Every car-switch and hand-control lever shall be arranged to return automatically to the "stop" position when the hand of the operator is removed.

(2) All directional buttons of automatic lifts shall be arranged to return to the "open" position when the hand of the operator is removed.

DIVISION III.—DESIGN II.

PART 31.—HEATING AND COOKING APPLIANCES.

HEATING AND COOKING APPLIANCES.

31-01. Every heating and cooking appliance shall be so constructed and/or so mounted that no electrical hazard is created thereby and it shall be of robust construction.

31-02. (1) The boiling and frying elements of every cooking appliance operated at a pressure exceeding 110 volts to earth shall be metal-clad, save that portable boiling-plates used in any place where a person touching the same is not likely, under normal conditions, to be simultaneously making contact with earth or earthed metal need not be metal-clad.

(2) The baking, grilling, and roasting elements of such appliances shall be so guarded by means of a guard attached in some permanent manner that the cooking utensils cannot be brought into contact with such elements and so that direct personal contact cannot be made with them when the guard is in position. Where an open type guard is used the openings shall be such as to prevent the passage of a ¼-in.-diameter steel ball except in the case of portable appliances used in any place where a person touching the element is not likely, under normal conditions, to be simultaneously making contact with earth or earthed metal.

31-03. (1) In the case of ranges exceeding 2½ K.W. in capacity the oven elements shall be protected by a fuse-link either separately or as a whole and all other elements shall be protected separately by a fuse-link.

(2) When a plug-socket is fitted on a heating or cooking appliance it shall be protected by a fuse-link.

31-04. No gas-electric range shall be used unless an approved insulating coupling is inserted in the gas-supply pipe immediately adjacent to the range.

APPLIANCES FOR HEATING WATER AND OTHER LIQUIDS.

31-11. The heating element of any appliance used for heating water or any other liquid shall not be in direct contact with any combustible material and where combustible material is used as lagging for a vessel containing a heating element such lagging shall be contained within an air-tight metal casing.

31-12. All heaters shall be so arranged and connected that the liquid entering into or issuing from them is at earth potential.

31-13. No appliance in which a live element is in direct contact with the liquid shall be used unless such appliance has been approved.

PART 32.—THEATRES.

32-01. (1) Every switchboard mounted on or over a theatre stage shall be either of the dead-front type or the switchgear and accessories shall be of the totally enclosed type.

(2) A metal hood approved by the Authorized Inspector and extending the full length of the switchboard and projecting sufficiently to protect it from falling objects shall be fitted at the top of the switchboard.

32-02. Every floor-plug and socket used on a theatre stage shall be so constructed that dirt and dust cannot accumulate in the socket and so that the contact surfaces cannot be readily short-circuited.

PART 33.—HIGH AND EXTRA-HIGH PRESSURES.

33-01. Cables used for high pressure or extra-high pressure shall be in accordance with British Standard Specification No. 7 or British Standard Specification No. 480 (as the case may be) or other approved types.

PART 34.—EARTHING.

34-01. (1) When an earthing-lead is connected to a pipe, rod, conduit, cable-sheath, or armouring, a substantial metal clip of not less than 18 S.W.G. (0.048 in.) ¾ in. wide, tinned or otherwise rendered incorrodible under normal conditions, or any other suitable earthing device, shall be used and it shall make good electrical contact therewith. Where any